

**BIOLOGICAL EVALUATION
Mountain Pine Beetle in
Lodgepole and Ponderosa Pine
Wasatch National Forest - 1973**

BIOLOGICAL EVALUATION

Mountain Pine Beetle Infestation

Kamas Ranger District
Wasatch National Forest

1973

INTRODUCTION

In response to a request for assistance, entomologists Lawrence Stipe and Douglas Parker evaluated a mountain pine beetle outbreak along the scenic highway between Kamas, Utah, and Mirror Lake. District and Supervisor Office personnel were concerned about the visual impact of concentrations of dead trees, the possible loss of high value trees in campgrounds, and the loss of the timber resource. The evaluation was conducted on September 5 and 6, 1973.

GENERAL INFORMATION

INSECT: Mountain pine beetle, Dendroctonus ponderosae Hopkins (Coleoptera: Scolytidae).

HOST TREES: Lodgepole pine, Pinus contorta Engelm. and P. ponderosa Laws.

LOCATION: Kamas Ranger District, Wasatch National Forest.

TYPE OF DAMAGE: The beetle is killing mostly lodgepole pine, but a few ponderosa pine are being killed.

EXTENT OF INFESTATION: Tree mortality was observed from the Yellow Pine Campground area up the highway to the Provo River Falls overlook. A map showing the distribution of the outbreak is appended.

BIOLOGICAL INFORMATION

During the 1950's, a large mountain pine beetle outbreak occurred on the Wasatch National Forest and many trees were killed in Beaver Creek and along the Provo River. The outbreak in these two drainages declined to a low level in the early 1960's, but an increase was detected in 1966. The infestation increased slightly in 1967 and 1968, but in 1969 a large buildup occurred. The rate of tree killing fluctuated slightly from 1970 to 1973 but tree losses remained at a relatively high level.

DISCUSSION

Attack ratios collected in September indicate that tree losses have increased in some lodgepole pine stands, while losses in other stands have decreased slightly (Table 1, Appendix). Overall losses were at about the same level as in 1972. Tree mortality was especially heavy in and around the Pine Valley Campground. Elsewhere, most of the susceptible trees already had been killed and few additional trees were attacked.

For the most part, the remaining lodgepole stands are composed of smaller diameter trees that will not favor further beetle population increases; therefore, the outbreak should start declining in these drainages in 1974.

Ponderosa pine losses should remain at a low level.

RECOMMENDATIONS

Overall control of this outbreak is not practical at this time. The extent of the outbreak, the accumulated losses, and the extreme cost of individual tree treatment exclude chemical suppression as a practical alternative.

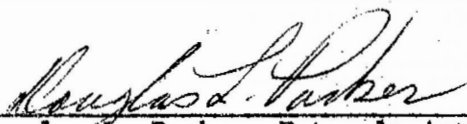
Salvage logging is the best approach to this problem. Removal of infested trees will have no appreciable effect on the beetle population, but the timber resource will be utilized instead of being lost. Logging should be undertaken in areas of greatest hazard; i.e., in stands containing the largest diameter lodgepole pine.

Further, it would be beneficial to salvage currently infested trees in and around campgrounds before July, 1974.

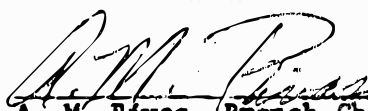
Removal of these trees will reduce the beetle population in the campground vicinity and lessen the possibility of additional trees being killed. These trees will have to be removed at a later date because of the hazard they present to campground visitors and installations.

Losses in areas having high esthetic and recreation values, where logging is not feasible, will have to be accepted as inevitable. These stands cannot be preserved in their present state.

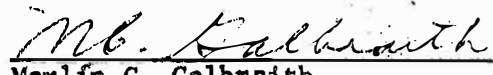
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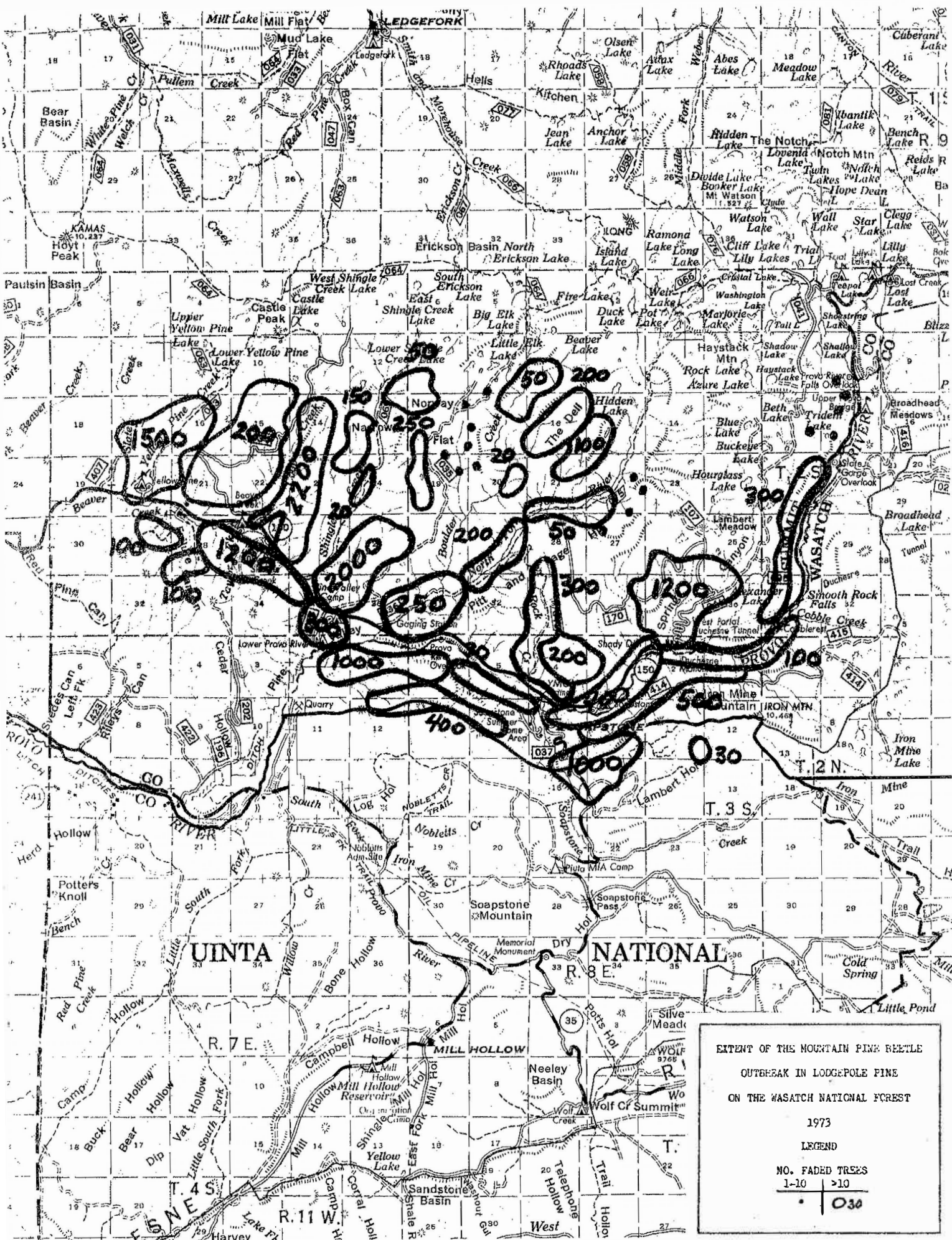

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EXTENT OF THE MOUNTAIN PINE BEETLE
OUTBREAK IN LODGEPOLE PINE
ON THE WASATCH NATIONAL FOREST

1973

LEGEND

NO. FADED TREES

1-10

>10

• 030

Table 1. Mountain pine beetle trend data collected on September 5 and 6, 1973, Kamas Ranger District, Wasatch National Forest.

Sample Locations	Number of Trees Observed		Attack Ratio		Trend
	1973	1972	1973	1972	
Yellow Pine Campground	29	14	2	1	Increasing
Pine Valley Campground	140	27	5	1	Increasing
Coop Creek	16	36	0.4	1	Decreasing
Soapstone Road	55	67	0.8	1	Decreasing